

**REMARKS**

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

**Status of Claims and Support for Claim Amendment**

Claims 1-23 are pending. Claims 1-5 and 12-20 stand withdrawn.

Claim 6 has been amended for clarity, to specify an upper temperature limit of 480 degrees C in the heating step, and to specify that the product is "hydrophobic". Support for the amendment to claim 6 is found in the specification at page 8, line 22 and page 8, lines 6-11. Dependent claims 7-11 are amended in parallel fashion. In addition, claims 21-23 are added to claim a product produced by the process of claims 6-8, respectively. No new matter has been added.

**Interview**

The Examiners are thanked for the courtesy of the interview held on February 28, 2008. The present response is based on the interview and contains discussion of the points raised at the interview.

**Claim Rejections – 35 USC § 112**

Claim 6 stands rejected under the first paragraph of 35 U.S.C. 112 in relation to the temperature range of the heating step. Without acquiescing in the correctness of the rejection, applicants have amended claim 6 to recite an upper limit for the temperature range of 480 degrees C. Accordingly, withdrawal of the rejection is requested.

Claims 7 and 8 stand rejected under the first paragraph of 35 U.S.C. 112 in relation to the sub-ranges of particle size and temperature. Specifically, the action indicated a belief that the examples did not support the claimed sub-ranges. At the interview, the Examiners reviewed the examples again and concluded that the sub-ranges are supported. Specifically, particle sizes in example were above 0.1  $\mu\text{m}$  and heating temperature was 400 degrees C, so this is within and does provide support for the claimed sub-ranges of claim 8. Similarly, example 2 relates to particle sizes

and heating temperature within the scope of claim 8. Lastly, example 3 relates to particle sizes below 0.1  $\mu\text{m}$  and heating temperature of 270 degrees C, so this is within and does support the claimed sub-ranges of claim 7.

The Examiners noted that example 4 relate to a heating time of only 10 minutes, which is outside the presently claimed range. Applicants maintain that the presence of an unclaimed example in the specification does not give rise to a basis for rejecting the present claims. In fact, the present specification does provide support for claiming a broader range of time treatment. See page 8, lines 5-6 of the present specification, which indicates that the invention extends to a lower time limit of 0.1 hours. However, this portion of the specification also indicates that a lower limit of 1 hour is a preferred embodiment, and applicants have elected to claim the preferred time range in the present application.

Accordingly, withdrawal of the rejection of claims 7 and 8 is requested.

**35 U.S.C. 103**

Claims 6, 10 and 11 stand rejected under 35 U.S.C. 103(a) as obvious over JP '271 in view of US '094. Claims 6, 10 and 11 stand rejected under 35 U.S.C. 103(a) as obvious over JP '484. Lastly, claims 6, 10, and 11 stand rejected under 35 U.S.C. 103(a) as obvious over JP '271 and JP '484. Reconsideration of the rejections is respectfully requested.

Of the 3 references, US '094 is the most readily distinguished because it relates to metal-coated powder particles. One of ordinary skill in the art would not apply its teachings about heat treatment of such metallic particles to the silicone-coated powders of JP '271. Moreover, the action cites paragraph 101 of US '094 for its teaching of heat treatment benefits, but this paragraph teaches conversion to silicon oxide ceramics, which are known hydrophilic materials. By contrast, the presently claimed invention relates to hydrophobic silicone-treated powders. Accordingly, the structure of the powders in US '094 are completely different from those of the presently claimed invention.

With respect to JP '484 and JP '271, applicants point out that these Mr. Kanemaru, a co-inventor of the present application, is also a co-inventor of these publications. Accordingly, Mr.

Kanemaru has provided the following explanation of the differences between these references and the presently claimed invention.

The Examiners pointed out at the interview that paragraph 39 of JP '271 mentions heating to about 400 degrees C, and that "a cross-linking reaction of Si-H radicals can be promoted with this heating." However, all of the examples in this reference heat at 100 degrees C, which is well below the presently claimed range. It is well-settled that a broadly generic reference, which partially overlaps a claimed range, does not render obvious the claim when an unsuggested advantage results from the claimed range. Example 3-1 of the present specification provides an example of heating at 270 degrees C (near the claimed lower temperature limit), showing favorable results, while Example 1-1 provides an example of heating at 400 degrees C (near the claimed upper temperature limit), which also shows favorable results. By contrast, Comparative Example 3-1 demonstrates that heating at 550 degrees C destroyed hydrophobicity, rendering the product unsuitable. Thus, the present specification provides a representative showing of examples within the claimed range demonstrating an advantage in the product that results from the claimed temperature range compared to JP '271, which makes no mention of the importance of controlling temperature within this range for the sake of reducing H<sub>2</sub> gas generation while preserving hydrophobicity. Further, JP '271 does not suggest anything about the importance of the relationship of particle size sub-ranges to temperature sub-ranges recited in instant claims 7 and 8.

The same is true with respect to JP '484. JP '484 in paragraph 46 (cited in the action) teaches treatment at 300 degrees C or less, but preferably at 0 to 250 degrees C, which is outside the present claims. As noted above, it is well-settled that a broadly generic reference, which partially overlaps a claimed range, does not render obvious the claim when an unsuggested advantage results from the claimed range. Example 3-1 of the present specification provides an example of heating at 270 degrees C (near the claimed lower temperature limit), showing favorable results, while Example 1-1 provides an example of heating at 400 degrees C (near the claimed upper temperature limit), which also shows favorable results. By contrast, Comparative Example 3-1 demonstrates that heating at 550 degrees C destroyed hydrophobicity, rendering the product unsuitable. Thus, the present specification provides a representative showing of examples within the claimed range demonstrating an advantage in the product that results from the claimed temperature range compared to JP '484, which makes no mention of the importance of controlling temperature within

this range for the sake of reducing H<sub>2</sub> gas generation while preserving hydrophobicity. Further, this reference does not suggest anything about the importance of the relationship of particle size sub-ranges to temperature sub-ranges recited in instant claims 7 and 8.

In addition, JP '484 seeks to introduce a pendant radical onto an Si-H base, as explained in paragraphs 36-40. In particular, paragraph 40 teaches use of a vinyl compound to react with the Si-H groups. This leads to a different structure from the presently claimed invention, which does not use vinyl to react with Si-H groups nor does it seek to introduce such pendant groups into the structure. The cross-linking that occurs in the presently claimed invention is as follows:



By contrast, the structure that results in JP '484 is as follows:



The presently claimed invention has achieved commercial success, one of the secondary considerations that may rebut a *prima facie* case of obviousness. Attached is a Rule 132 Declaration from Mr. Kanemaru providing evidence of commercial success. The Declaration shows that the presently claimed powder can be produced for about one-third the cost of the prior powders used by the Assignee of this application, Shiseido. The presently claimed powders are so successful that, since Shiseido began using them in its products in March 2001, they are now used in 747 types of commercial products marketed throughout the world, including Japan and the US.

Accordingly, withdrawal of the rejections under 35 U.S.C. 103 is requested.

### Conclusion

The Commissioner is hereby authorized to charge any additional fees that may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the

Atty. Dkt. No. 053466-0372

Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,



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